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Labour Force Survey
Research Paper Number 4

The Canadian Labour Force Survey



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The Canadian Labour Force Survey

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THE CANADIAN LABOUR FORCE SURVEY

The Labour Force Survey (LFS) is the most widely used source of information on employment and unemployment in Canada. Its voluminous monthly statistical output provides not only grist for the research mills of government and academia, but provides the general public one of its most familiar indicators of the economic health of the country. Despite the wide usage of the data, however, many aspects of the survey are either unknown to, or poorly understood by, data users. The purpose of this paper is to summarize the background information which is essential to a good understanding of LFS data, and to provide references to more comprehensive material for those who may require it⁽¹⁾. The first section of the paper refers generally to the survey vehicle itself, while the second section focuses on survey data.

The Survey

Coverage: The LFS is a monthly household survey carried out by Statistics Canada interviewers throughout the country. Approximately 98% of the population 14 years of age and over is covered in the survey. Excluded are populations in the Yukon and Northwest Territories, residents of Indian Reserves, members of the Canadian Armed Forces, and inmates of institutions. The exclusion of the Yukon, NWT and Indian reserves has been based on both operational and statistical considerations, namely, the difficulties involved in carrying out monthly surveys in such areas and the general inapplicability of the survey concepts and definitions to the measurement of labour market conditions in northern and isolated reserve communities. Efforts have been, and continue to be, made to find conceptually and operationally feasible methods of extending survey coverage to these excluded areas, but as yet no satisfactory solutions have been found.

(1) References shown in brackets [] in the text refer the reader to documentation listed in Appendix I.

Sample design[1]: The selection of households for the sample is on the basis of area sampling, using a stratified, multi-stage sample design. Put simply, each province is divided into progressively smaller representative units, and a statistical selection (based on probability proportional to population size) is made of the areas to be included in the sample, followed by (systematic) selection of the dwellings to be interviewed within each area. Hence, at the time of sample selection, no information is known about the persons living in households within the selected dwellings.

Each household is retained in the sample for six consecutive months, and no substitution of households takes place in the event that information cannot be obtained for one of the sample units. Should household composition change during the course of the six months - for example, one family leaving and another family moving in - the new household members are included in the sample for the remainder of the six month period, replacing those who left.

The rotation of households in the sample is carried out so that one-sixth of the sample is changed each month, i.e. one-sixth of the households (those which have been included for six months) are replaced by other households in the same, or similar area. The six-month rotation period provides major operational and statistical advantages, particularly in terms of survey costs and timeliness, and has a definite statistical impact as well. As is generally the case with repeated surveys, the data derived from households interviewed for the first time tend to be slightly different from estimates derived from subsequent interviews. In the case of the LFS, for example, the unemployment rate for that portion (one-sixth) of the sample interviewed for the first time averages several tenths of a point higher than the rate for the remainder of the sample. As the result, a change in rotation

pattern (e.g. to the four months in, eight months out, four months in system used in the U.S. Current Population survey) could have a distinct impact on the survey data.

At present, approximately 35,000 households are included in the sample, allocated in a fashion which permits publication^[2] of estimates of basic labour force characteristics for all provinces. Of course, the estimates vary substantially in terms of their "reliability" (sampling variability) due to the considerable differences which exist between provinces in terms of population size, sample size and frequency of occurrence of the characteristics (e.g. unemployment) being measured. Increases in the sample size to approximately 55,000 households are now underway, with the primary objective of improving the amount and reliability of data, particularly at the provincial level and, for smaller estimates, at the national level. The impact of the sample expansion on the sampling variability of the national and provincial unemployment estimates is illustrated in Table 1.

Despite the increase in sample size, however, the LFS cannot serve as a source of small area data. At best, given the sample size and sample design, estimates for major characteristics can be produced for the economic regions (or groups of regions) which lie within provinces, or in some cases, for areas comprised of complete strata or major metropolitan areas within various economic regions.

Survey Reference Period: The survey data in general refer to a particular week in the month, normally (with the exception of December) the week containing the 15th day. In analysing the data, it is important to consider the reference dates, particularly when comparisons are being made with data from other sources (e.g. Census), since the employment and unemployment levels can vary considerably in a matter of a week or two and since the changing date of certain holidays (e.g. Easter) can have a not-so-

Table 1. Allocation of Labour Force Survey Sample

Province	Original Sample ⁽¹⁾		Expanded Sample		
	Households	C.V. ⁽²⁾	Households	C.V.	% S.R. ⁽³⁾
Newfoundland	1,815	8.64	3,091	6.57	2.34
Prince Edward Island	479	15.54	1,436	8.94	4.23
Nova Scotia	3,262	7.79	4,234	7.01	1.73
New Brunswick	2,539	9.12	4,260	7.20	2.31
Quebec	7,308	4.22	8,555	4.01	0.45
Ontario	9,544	4.76	10,903	4.60	0.42
Manitoba	1,860	11.38	4,489	7.86	1.52
Saskatchewan	1,997	13.56	5,989	7.62	2.09
Alberta	3,404	8.91	6,806	6.24	1.26
British Columbia	4,197	6.36	5,968	5.77	0.83
Canada	36,405	2.36	55,731	2.18	—

Notes: (1) Sample sizes are those which would be expected in March 1977, allowing for natural growth in the population.

(2) C.V. refers to the coefficient of variation for the estimate of unemployment.

(3) % S.R. refers to the overall sampling ratio. The ratio varies within each province depending on the type of area and other factors.

For more information on sample size and allocation, see Labour Force Survey Methodology, Statistics Canada, Cat. No. 71-504 (1976) (forthcoming).

subtle impact on the statistics. The fact that the reference week moves forward or back, by as much as a full week according to changes in the calendar, must also be taken into account, since this fact alone can sometimes cause irregularities in the data, particularly in the seasonally-adjusted series.

Data Collection Procedures: Data collection is carried out during the week following reference week. Statistics Canada interviewers, who are part-time employees hired and trained specifically to carry out the survey, contact each of the households in the sample, through personal or telephone interviews, to obtain the information needed to produce the labour force data (see survey questionnaires shown in Appendix II). Each interviewer contacts approximately 50 designated households, with the individual assignment size varying by type of area, and conducts a face-to-face interview in all households which are being interviewed for the first time. In urban areas, provided the respondent agrees, subsequent interviews may be conducted by telephone, an interview technique which we have found to have no discernable impact on the data and which offers significant savings in time and cost.

One aspect of data collection which does have a considerable influence on survey operations is that of proxy response, i.e., the collection of information from one member of the household pertaining to all other household members. Given the high cost and extended time periods which would be involved in the repeat visits necessary to obtain information directly from each respondent, interviewers normally obtain all the data from one "responsible" member of the household. The result is that proxy response accounts for roughly 55 per cent of the data collected. Obviously, this factor must be taken into account in the design and content of the survey questions, and means that certain types of questions, particularly of the attitudinal variety, must be avoided or at least used with considerable caution. The present

LFS documents have been designed to minimize the proxy response problem, but nonetheless this factor should not be ignored in any detailed analysis of survey data.

The importance of the data collection phase of survey operations cannot be overstated, and substantial and continuing efforts must be made to ensure that the information collected is as accurate, consistent and complete as possible. In addition to the care taken in the design of the sample and survey questionnaires, and in the initial selection and training of interviewers, regular quality control measures are carried out to help maintain performance levels. Two of the more important components of the quality control program are observation and re-interview. In the observation program, senior personnel accompany interviewers on a systematic basis to observe their work, with the objective of providing individual assistance, if required, and assessing any general points, positive or negative, which may affect overall survey performance. The re-interview program provides further information on individual or generalized problems through re-interviews of a sample of households. Each month, a small fraction of the sample is re-interviewed by senior interviewers shortly after the regular interviewer has conducted the monthly interview. For part of the sample, the senior interviewer reconciles, i.e. determines the reasons for, any differences in responses between the original and re-interview, and for the remainder simply completes the re-interview for subsequent analysis. The re-interview program is designed to serve two major purposes, first, as an aid to management of data collection activities in the field, and second, as a source of information on non-sample error. The latter objective is a new one, and since the program has only recently been modified to achieve it, we as yet cannot report any statistical results.

Estimation Procedures [1]: The production of summary statistics from the information collected by the interviewers involves, as one might expect, a rather complex process. First, the information is sent to Statistics Canada regional offices, from where it is transmitted to Ottawa, this alone being a rather complicated task involving (simplifying somewhat) regional office data capture on mini-computers, telecommunication of the data to Ottawa, and consolidation of the transmitted information onto files for (a) further processing or (b) transmittal back to the regional offices for preparation of the next month's survey documents. Each step in this process provides opportunity for mistakes, of course, and rigorous control mechanisms must be employed to minimize the degree of error.

Once the raw information has been received for processing, it is put through an iterative sequence of editing, error correction, imputation, industry/occupation coding, weighting and tabulation. The editing, error correction and imputation phases of processing essentially involve the identification of erroneous or missing information items, and the correction of such values. Since the "true" value of each entry on the questionnaire is not known, the identification of errors can be done only through recognition of obviously unlikely or extreme values (e.g. a report of 80 hours worked on main job and another 80 hours worked on other jobs) or inconsistencies (e.g. a 15-year old respondent who last worked in 1940). Obviously, if a value is in fact "wrong but reasonable" (e.g. a report of 40 hours worked when in fact the respondent worked only 38 hours), the erroneous value will find its way into the monthly statistics. In such cases, the emphasis must be on survey performance controls to ensure that errors are both minimal in number and random in nature. Future re-interview data will be of considerable value in assessing the significance of errors of this type.

Where errors or omissions are detected, a correction or imputation of the item must be made. Such changes may be made automatically by the edit program, if the decision rules for the correction can be precisely specified, or through clerical intervention. In the latter case, decisions are based on specified criteria, and may involve reference to earlier month's information, if such is available, or the use of similar records to impute one or more values. In all cases, records are kept of edit changes and this information is used to assess various aspects of survey performance.

The coding of industry, occupation and class of worker status is a clerical operation carried out in the course of head office processing. The coding is done once following the first interview, and the assigned codes are repeated in following months, provided no change has occurred since the previous interview.

After the coding and editing operations have been completed, the sample results must be weighted to enable the tabulation of estimates at national, provincial and sub-provincial levels of aggregation. Several steps are involved in the weighting process, but essentially it involves inflating the sample data to independent estimates of the sampled population, i.e. the civilian, non-institutional population in the areas covered by the survey. The sample design determines the basic weighting factor (the reciprocal of the sampling ratio) to be applied to each record, and there are two common adjustments to this basic weight, one for non-response, the other for what is known as slippage.

Non-response, some degree of which cannot be avoided, is compensated for either through use of appropriately adjusted data (if such exists) from the previous month's survey, in which case the weighting factor is not affected, or through increasing the weights attached to the households in the area (sub-unit) in which the non-response occurs. Adjustment for non-response at the sub-unit level is based on the assumption that the households which have

been interviewed in a particular area best represent those in the area for which no response has been obtained. To the extent that this assumption is not correct, bias can occur in the estimates, and for this reason every effort is made to keep non-response to a minimum. Such efforts have been quite successful in the Labour Force Survey, and overall non-response rates generally range between 5 and 10 percent.

Slippage is the term applied to the difference between the population estimates derived by summing the weighted sample records and comparable population estimates based on an independent source. In the LFS, monthly estimates of the population to be sampled are prepared [3] by age-group, sex and province. The estimates from the sample are compared with these age-sex-province totals, and the sample weights are adjusted to make the sample data agree with the independent control totals. Normally, the sample weights require upward adjustment, since there is a tendency for under-coverage in the sample as the result of failure to enumerate households, or individuals within households, particularly in the first interview. Such under-coverage is not large, averaging under 5 per cent, but may be more significant for particular age/sex groups, e.g. 20-24 year old men. As with non-response, efforts are concentrated on minimizing slippage rather than compensating for it through the weighting process, since bias in the estimates can occur if the characteristics of the under-enumerated population are different from those included in the survey.

The independently-prepared population estimates to which the sample data are adjusted are themselves subject to a degree of error, although our experience has been that the estimates are in fact quite accurate, certainly more accurate than the unadjusted estimates generated through the sample. The population estimates, and consequently the labour force estimates, are normally revised after each Census to take account of any differences which have developed between the projections and the Census benchmark data.

Tabulation of the LFS data takes place after the final weighting has been completed, and virtually any combination of cross-tabulations can be produced. All tabulated data are published, or provided on request, subject to a "reliability" criterion which is related strictly to the sampling variability and size of the estimate. Indicators of the approximate coefficient of variation are given [2] for most series as a guide to their reliability from a sampling point of view, although there is an unfortunate tendency on the part of data users to ignore such information. In addition to the tabulated data, micro-data tapes, i.e. tapes containing individual records from which all identifying information has been removed, are, or will be, available for each monthly survey.

Seasonal Adjustment: Employment and unemployment levels traditionally have been subject to substantial, albeit decreasing, seasonal fluctuations, and it therefore has been appropriate to attempt to remove the seasonal variations to better portray the underlying trend of the various series. This task, however, is not a simple one, especially for series in which fairly rapid changes in seasonal patterns have occurred and in which irregular movements, due to sampling variability or other causes, are relatively large. The latter situation is a frequent problem when dealing with relatively small estimates, such as provincial unemployment levels, and it therefore is necessary to repeatedly stress to data users the importance of assessing trends in such seasonally-adjusted data over the past several months rather than focussing entirely on the last wiggle in the line.

The choice of seasonal adjustment method, or the level of disaggregation at which seasonal adjustment takes place, can influence the estimates, although most methods will show the same general trends in the various series. The U.S. Bureau of the Census Method II, X-11 (multiplicative) version is the method presently used to adjust the LFS series, although other alternatives presently are being examined [4].

Seasonal adjustment is especially difficult for many labour force series at present due to the recent revisions in the survey. The modifications to the survey (discussed later) have had the impact of significantly changing the seasonal patterns in many of the unemployment series, necessitating an historical revision of earlier years data in order to obtain a consistent time series for use (inter alia) in the seasonal adjustment program. Since the historical revision had to be effected primarily on the basis of only one year's (1975) data, the seasonal pattern built into the revised series may not be entirely accurate, and to the extent that this is the case, current seasonal adjustment factors will require revision. Unfortunately, it will require at least another two years of observations from the revised survey before a more accurate assessment can be made, and in the meanwhile all that can be said is that the seasonally-adjusted series are subject to larger future revisions than normally would be the case.

Recent LFS Revisions [5,6,7,8]: At the beginning of this year, a number of major changes in the LFS were introduced. The revisions followed some three and one-half years of development, and have resulted in significant changes in both survey operations and survey data.

The major objective of the revision program was to meet growing requirements for a more comprehensive range of information on employment and unemployment in Canada. In particular, the revised survey was designed to provide (1) more data on the composition and characteristics of the employed, the unemployed and persons not in the labour force, (2) more data relating to the dynamics of the labour market (i.e. the flows from one category to another over time) and (3) more detailed and more accurate estimates, particularly at the provincial level. In addition to these data objectives, the revision program also involved making substantial changes in data collection and data processing procedures, re-designing the

sample frame and introducing refinements in sampling methodology, revising the population estimates used to weight the sample data, and enhancing all other aspects of the survey, including the capacity to undertake supplementary surveys and to carry out analytic studies involving survey data.

The overall approach taken to bring about the revision was to identify as precisely as possible the data requirements of various users, develop the questionnaires and survey procedures which would best meet the identified requirements, carry out a parallel run of the revised survey with the on-going survey for a period of one year, and then introduce the new survey as the source of current monthly labour force data. These phases of the revision program were completed on schedule in January, 1976, and the final phase of the revision, the above-mentioned substantial increase in sample size designed to improve the reliability and availability of provincial data and smaller estimates in general, has been scheduled for completion early in 1977.

In addition to achieving the objectives of broadening the amount and type of information available about the Canadian labour market (discussed in some detail below), the survey revisions resulted in significant changes in the levels and seasonal patterns of some of the existing data series. The introduction of more direct and more detailed questioning about labour market activities, and the incorporation of this additional information into the definitions of employment and unemployment, led to slight upward revisions in estimated employment levels, substantially higher female unemployment estimates and significant reductions in unemployment levels for men, particularly in the winter months. The increase in the employment estimates, which was concentrated among women and, to a much lesser extent, men 15-24 years of age, resulted from the revised survey's better identification of employment activities (especially part-time work) and job-holding, and similarly, the more precise identification of job search activities led to an expected substantial increase in female unemployment levels. The

significant reduction in the number of men classified as unemployed occurred primarily as a result of the exclusion from the unemployed category of persons not actively seeking work.

The changes in levels and seasonal patterns which occurred in many of the unemployment series made much more difficult the task of linking the series from the revised and former series. The one-year parallel of the two surveys had been conducted to provide the information needed for purposes of historical revision, and for most employment series, and some unemployment series, the one-year overlap period furnished adequate information, i.e., reasonable adjustment of previous years' data could be made based on the relationships which existed between the two sets of data during 1975. However, for some series, particularly male unemployment, the differences between the two surveys, combined with the unusually high unemployment levels of 1975, make it less certain that historical revision based on the 1975 data will prove to be fully satisfactory. In using revised historical series, therefore, users should keep in mind the limitations inherent in the revision process.

Having noted above the major methodological and operational considerations which must be taken into account in the use of LFS data, the remainder of this paper is devoted to the survey data in terms of concepts, definitions and information content.

Survey Data

Statistical Objectives: Since its inception, the statistical objectives of the Labour Force Survey have been to divide the working age population into the three mutually exclusive and exhaustive classifications of employed, unemployed, and not in the labour force, and, to provide descriptive and explanatory data on each of these categories.

The questions or items which make up the survey documents, (copies of which are contained in Appendix II), can therefore be divided into two groups according to their contribution to the objectives. One group consists of items which serve to identify the employed and the unemployed and consists of questions such as "LAST WEEK DID ... DO ANY WORK AT ALL - not counting work around the house?" and "IN THE PAST 4 WEEKS, WHAT HAS ... DONE TO FIND WORK?". The choice and content of these items was based on the selected definitions of employment and unemployment which in turn were derived from the corresponding concepts. (A review of these concepts and definitions is found in the next section of this paper).

The other group consists of items which provide descriptive information on an extensive range of characteristics of persons in each of the three labour force classifications. For example, hours worked, duration of job seeking, and date when last worked. Without exception, the adoption of these particular items was based on priorities determined through an intensive data user consultation exercise undertaken in 1973 and 1974. This consultation canvassed not only all of the data users in the federal and provincial governments but representatives of the business, labour, and academic communities as well.

Furthermore, because of the statistical and operational distinction made between the items used to perform the labour force classification and the remaining descriptive items, it will be possible to modify and/or replace various descriptive items in response to

changes in data user priorities without disturbing the essential time series on employment and unemployment.

A listing of these descriptive variables is found on page 24.

Theory, Concepts, and Operational Definitions:

- (1) Concepts: The concepts of employment and unemployment are derived from the concept of the supply of labour as a factor or production measured over a short interval of time. The production referred to is in turn defined as those goods and services included in the national accounts.

While the logical and precise unit of measurement of total labour supply is man-hours (if we may be allowed to continue to use the term), the conceptual terms of reference for the survey require that individual members of the population be classified as employed, unemployed, or not in the labour force. Accordingly, persons who are supplying labour services in the reference period, regardless of the quantity supplied, are labelled employed while those who provide evidence that they are offering their labour services to the market (again regardless of quantity) are labelled as unemployed. The remainder of the population, those neither actively supplying nor offering their labour services, are referred to as persons not in the labour force.

Before developing operational definitions from these concepts it is necessary to make certain assumptions regarding the characteristics of the labour markets monitored by the survey. Firstly, it is assumed that it is a free market in which suppliers of labour can individually offer or withdraw their services in response to both current market and non-market factors. Secondly, it is assumed that there exists a deficiency of information on both the supply and demand sides of the market, that is, employers do not know the identity or qualifications of potential employees and persons offering their labour

services are not aware of the identity of potential employers nor the exact terms of employment obtainable.

(ii) Definitions:

Employed: The definition of employment flowing from the above concept of the utilized supply of labour, is as follows:

The employed includes all persons who, during the reference week:

(a) did any work at all

(Work includes any work for pay or profit. That is, paid work in the context of an employer-employee relationship, or self-employment. It also includes unpaid family work where unpaid family work is defined as unpaid work which contributed directly to the operation of a farm, business or professional practice owned or operated by a related member of the household).

(b) had a job but were not at work due to:

- own illness or disability
- personal or family responsibilities
- bad weather
- labour dispute
- vacation
- other reason not specified above (excludes persons on layoff and persons whose job attachment was to a job to start at a definite date in the future).

Unemployed: Given the concept of unemployment as the unutilized supply of labour and given the assumptions regarding the nature of the labour market, then the operational definition of unemployment is based primarily on the activity of job search, since job search is assumed to be the means

of eliminating the information deficiency and thereby clearing the market and since job search activities can be objectively measured over time in a household survey.

The definition of unemployment reads as follows:

The unemployed includes those persons who during the reference week:

- (a) were without work, had actively looked for work in the past four weeks (ending with reference week), and were available for work
- (b) had not actively looked for work in the past four weeks but had been on lay-off (with the expectation of returning to work) for twenty six weeks or less and were available for work
- (c) had not actively looked for work in the past four weeks but had a new job to start in four weeks or less from reference week, and were available for work.

It will be noted that in the above definitions there are two groups for whom job search is not required, specifically, persons on layoff and persons with a job to start at a definite date in the future.

Persons on layoff (up to 26 weeks) are included on the grounds that their willingness to supply labour services is apparent in their expectation of returning to work and is not vitiated by the lack of job search since the expected time to find alternative employment may be greater than or close to the expected balance of the layoff.

A very similar argument applies to persons waiting to start a new job at a definite date in the future.

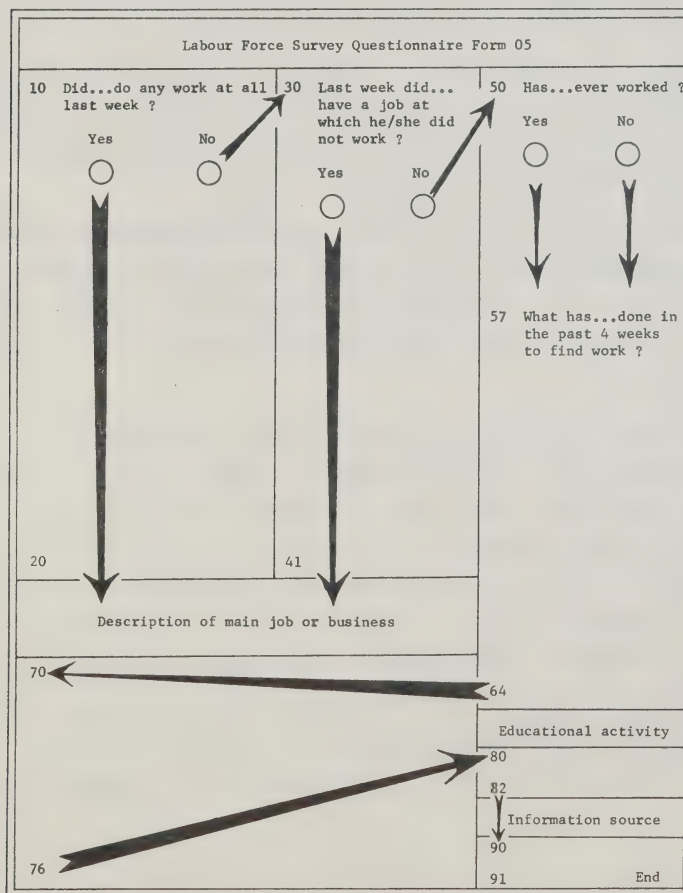
Finally, some readers will note that for purposes of identifying the unemployed, the LFS now uses a 4 week period as opposed to the one week period formerly prescribed. Apart from the statistical evidence which shows that the de facto reference period in the former survey was about 4 weeks, the delays inherent in job search and job application require that the active element of looking for work be measured over a period of greater than 1 week if a comprehensive measure of job-seekers is to be obtained.

No presentation of the definition of unemployment would be complete without some reference to the so called "discouraged workers". Given the conceptual basis of the unemployment estimates, and the fact that the dependence on job search to identify the unemployed is based on assumptions regarding the characteristics of all of the labour markets in which measurement takes place, it can be argued that the survey is undercounting unemployment by failing to include persons offering their labour services in markets where active or continuous job search is superfluous. This phenomenon is thought to be most prevalent in small, geographically isolated communities with very few employers, where knowledge of any and all suitable vacancies can be passively acquired through the social network typical of these communities. While the problems of defining and identifying discouraged workers can be articulated readily enough, the solution has persistently eluded survey designers. The result is that no country which uses a household sample survey as the source of its official unemployment statistics has developed a fully satisfactory set of questions which would accurately and consistently identify the "discouraged workers" in the context of a national monthly survey. Developmental work in this area will continue in Statistics Canada, primarily through the use of the LFS supplementary survey capacity.

Not in the labour force: Conceptually, persons not in the labour force are those who, during the reference week, were unwilling or unable to offer or supply labour services under conditions existing in their labour markets. However, in terms of operating definitions they are identified residually, that is, as persons who are neither employed nor unemployed.

Questionnaire Design and Data Output: In order to more fully appreciate the data output capacity of the LFS, some knowledge of the design of the questionnaire may be of value.

The arrangement of the document's content was derived from the operational definitions of employment and unemployment and the overall layout is represented schematically in the following diagram.



(See Appendix II
for complete
questionnaire)

Given that the LFS definitions stipulate that one or more hours of work in the reference week will result in the respondent being classified as employed, the first question addressed to the respondent (item 10) asks, "LAST WEEK DID ... DO ANY WORK AT ALL - not counting work around the house?" A "Yes" answer is sufficient to establish the labour force classification (employed) and the respondent then proceeds to answer a series of questions related primarily to the work performed (items 11 to 20, 71 to 76) and any concurrent educational activity (items 80 to 82). A "No" answer leads to the question (item 30) "LAST WEEK, DID ... HAVE A JOB AT WHICH HE/SHE DID NOT WORK?" A "Yes" answer here is followed by an item (item 33) which yields the reason for the absence from work and except for persons whose job attachment is to a job to start at a definite date in the future, and for persons on layoff, the subsequent questions relate primarily to either the characteristics of the job held (items 34 to 36, and 71 to 76) or to the absence (item 37 and 38). Other than the two exceptions noted, these persons are classified as employed.

A "No" reply to item 30 leads to item 31 regarding future starting date jobs and a "No" reply to item 31, (which exhausts the possibilities of concrete job attachment), leads to collection of data on the respondent's last job (if any) in items 50 to 54.

All respondents who have no current job attachment or whose job attachment is to a job to start in the future or one from which they have been laid off, are asked about any job search which they may have conducted in the past 6 months. A "No" answer results in the respondent going to item 70 while a "Yes" answer is followed by item 57 which asks, "IN THE PAST 4 WEEKS, WHAT HAS ... DONE TO FIND WORK?" For those who have undertaken some form of active job search in the past 4 weeks, items 58 to 62 obtain information relating to looking for work. In some cases this is followed by a question on reason for not

actively seeking work in the reference week (item 63) and in all cases a question on availability is asked (item 64).

Those who have looked for work in the past 6 months but not in the past 4 weeks ("Yes" in item 56 and "Nothing" in item 57) are asked why they ceased seeking work (item 63) and their availability for work in the reference week (item 64).

All respondents, regardless of the path taken through the questionnaire, are asked item 80 on educational activity and where appropriate items 81 and 82 as well.

By means of this highly structured approach to questioning a very substantial amount of current and historical information is obtained from each and every respondent without subjecting any one respondent to more than a fraction of the 43 questions on the form.

The following table shows, in severely condensed form, the range of data available for each of the labour force classifications and for the covered population as a whole. This table does not convey a complete picture of the survey's output since the effective boundaries of the content can only be appreciated when one considers all of the possible cross-tabulations.

Content Table

Labour Force
Classification

Information Collected

ALL PERSONS
REGARDLESS OF AGE

(From Household Record Docket)

- A. Age (single years)
- B. Sex
- C. Marital status (4 categories)
- D. Relationship to head of economic family (7 categories)
- E. Geographic location
- F. Educational Attainment
 - 1. Years of primary or secondary education completed (6 categories)
 - 2. Post secondary education (3 categories)

ALL PERSONS 14 YEARS OF AGE
AND OVER

(From LFS Questionnaire)

(Data is collected for all persons 14 years of age and over but published for persons age 15 and over. Data including 14 year olds is available on request)

- A. Educational Activity in Reference Week:
 - 1. Enrolled in a school, college, or university.
 - 1.1 Full-time/part-time
 - 1.2 Type of school, etc. (4 categories)
 - 2. Not enrolled in a school, college or university.

LABOUR FORCE

The following data refer to the current main job for the employed and the last job held within the past 5 years for the unemployed.

Labour Force
Classification

Information Collected

- A. Industry (1970 SIC)
- B. Occupation (1971 CENSUS (CCDO))
- C. Class of worker
 - 1. Worked for others
 - 1.1 Paid worker
 - 1.2 Unpaid family worker
 - 2. Self employed
 - 2.1 Incorporated business with paid help
 - 2.2 Incorporated business no paid help
 - 2.3 Not incorporated with paid help
 - 2.4 Not incorporated no paid help

(For publication purposes, groups 2.1 and 2.2 will be classified as paid workers).
- D. When start working for (last) employer (month and year)
 - combined with "when last worked" to calculate job tenure.

EMPLOYED:

(a) Worked

- A. More than one job in Reference Week
 - 1.1 Result of changing employers
 - 1.2 Not result of changing employers
 - 1.3 Class of worker in second job
- B.1 Hours worked in Reference Week
 - 1.1 Main job
 - 1.2 Other job(s)
- 2 Usual hours worked
 - 2.1 Main job
 - 2.2 Other job(s)
- 3 Hours lost or taken off in Reference Week
- 4 Extra hours worked in Reference Week.

Labour Force
Classification

Information collected

- C.1 For those usually working less than 30 hours at all jobs
 - 1.1 Reasons for usually working less than 30 hours (7 categories)
- 2 For those with hours lost
 - 2.1 Reason for losing hours (10 categories).
- D. Persons looking for another job in past 4 weeks.
 - 1. Methods of job search (up to 3 categories)
- E.1 Changed employers in past month
 - 2 Did not change employers in past month.
- (b) Had a job but was not at work
 - A. Reason for absence (8 categories)
 - B.1 Had more than one job in Reference Week
 - 1.1 Class of worker in second job
 - 2 Did not have more than one job in Reference Week.
 - C. Usual hours worked
 - 1. Main job
 - 2. Other job(s)
 - D. For those who usually work a total of less than 30 hours.
 - 1. Reason for usually working less than 30 hours (7 categories).
 - E. Weeks absent from job
 - 1 Received wages or salary for absence in Reference Week.
 - 2 Did not receive wages or salary in Reference Week.
 - F. For person looking for a new job
 - 1. Methods of job search (up to 3 methods recorded).
 - G.1 Changed employers in past month
 - 2 Did not change employers in past month.

Labour Force
Classification

Information Collected

UNEMPLOYED

- A.1 Without work in Reference Week and seeking work within the 4 weeks ending with Reference Week.
 - 1.1 Methods of job search (9 categories)
 - 1.1.1 When method was last used (Weeks ago).
 - 2 On layoff
 - 2.1 Weeks on layoff
 - 3 New job to start at a definite date in the future.
 - 3.1 Weeks between Reference Week and starting to work at it.
- B.1 For persons who have worked
 - 1.1 When last worked (month and year)
 - 1.1.1 If worked in last 5 years
 - (i) Usual hours per week at last job
 - (ii) Main reason for leaving that job (9 categories)
 - .2 Number of weeks of unemployment
- C. Number of hours per week of work sought.
- D. For persons who did not look for work in Reference Week.
 - 1. Reason (10 categories)
- E. Activity immediately prior to starting to look for work (4 categories).
- F.1 Looking for a job to last 6 months or less (Seeking temporary or permanent employment)
 - 2 Looking for a job to last more than 6 months (Seeking temporary or permanent employment)
- G.1 Available for work in Reference Week.
 - 2 For persons who were not available for work.
 - 2.1 Reason (5 categories).

Labour Force
Classification

Information Collected

NOT IN THE LABOUR FORCE

- A. Permanently unable to work
(Yes/No)
- B. For persons who have worked
 - 1 When last worked (month and year)
If worked in last 5 years.
 - 1.1 Hours per week at last job
 - 1.2 Reason for leaving last job
(9 categories)
 - 1.3 Industry
 - 1.4 Occupation
 - 1.5 Class of work (6 categories)
 - 1.6 When start working for employer
(month and year)
- used with "when last worked"
to calculate job tenure.
- C.1 Whether or not sought work in the
past 6 months
 - 1.1 If sought work reason for not
seeking work in Reference Week
(10 categories)
 - 1.2 If sought work availability for
work in Reference Week.

Future Data Developments: While the cross-sectional estimates presently available from the survey provide a source of information which researchers and analysts have not yet begun to exploit, even more data can and will be derived from the LFS. Some of these developments are described below.

- (i) Gross flow estimates: Historically LFS data users have had to be content with estimates of stock measures of employment, unemployment etc., even though much of the theory relating to labour markets has been formulated in terms of the flows among these categories. In recognizing this real and persistent gap in our labour market information system, certain features were incorporated into the design of the revised survey to maximize the likelihood that flow data

could be derived from the LFS. Statistics Canada is now well into the development of gross flow estimation routines and it is expected that gross flow estimates will be available by the end of 1976 at the latest.

In a closely related area, exploratory work is being done towards the derivation of turnover (hirings and separations) statistics. Success in this area will be announced in the Labour Force Survey Division Monthly Publications.

- (ii) Longitudinal Files: As noted elsewhere in this paper, selected dwellings are retained in the sample for a period of 6 consecutive months with one sixth of the sample being replaced each month. The survey has always contained this feature because of the cost and sampling variability advantages which it provided. However, for some time now it has been recognized that this feature also yields the raw material for a longitudinal picture of the labour force statuses and activities of the sampled population.

Ultimately we would like to provide the users with both weighted longitudinal estimates and longitudinal micro files (that is, individual records linked over 6 months but shorn of uniquely identifying information in order to avoid disclosure). The development effort is substantial and since it is relatively new and unfamiliar area of data generation, it is difficult at this time to predict when these data might become available.

- (iii) Micro files: In recent years, Statistics Canada has made micro files (that is, magnetic tape files of individual records) available to the data users. We plan to resume the generation and dissemination of information in this form once the criteria for the revised survey have been developed to maximize the level of statistical detail in the files while ensuring absolutely that no information which might lead to the identification of an individual respondent is released.

- (iv) Family-Based Data: Since all members of the households selected for the sample are included in the survey, the Labour Force Survey will continue to make use of this design feature for the production of data related to families. The survey is capable of assembling data on families covering all the possible combinations of labour force statuses and activities recorded on the documents for the individual family members. Unfortunately, this capacity cannot be fully exploited in terms of generating weighted estimates for the entire universe since at present independently derived family estimates by which the sample data could be weighted are not available. Accordingly, the possibility of generating total family estimates suitable for weighting is being investigated as are some "self-weighting" schemes. In the meantime, Statistics Canada will continue to produce family data but this data will be confined to those families containing one or more unemployed individuals.
- (v) Supplementary Surveys: Included as part of the recent survey revision was a substantial increase in the supplementary survey capacity of the LFS. This increased capacity will be used not only to extend the monthly labour force data but also to provide Statistics Canada with an enhanced capability for the collection of social statistics in general. In the former LFS, supplementary surveys were conducted to a very large extent on an ad hoc "as needed" basis. While this was well suited to short-term, high priority data requirements, it was not compatible with the generation of a consistent time series for inter-temporal comparisons. Accordingly, present plans call for the creation of a program of periodic supplementary surveys designed to extend the information collected through the monthly questionnaire.

The content of these surveys has been broadly outlined using the information collected in the LFS revision project user consultation exercise. The details of specific surveys will be established through testing and additional data user consultation. It should be noted that this program will consume less than half of the total annual supplementary survey capacity leaving the balance to service requirements for various social statistics.

An example of the type of survey envisaged for this program is the measurement of annual labour force participation patterns scheduled for January 1977. In addition to the annual duration measures of working and looking for work traditionally found in this type of survey, we will be attempting to measure in some considerable detail the distribution of these activities over the course of calendar 1976.

Conclusion: The new information which can be generated by the revised Labour Force Survey offers unprecedented analytical opportunities for researchers in the area of manpower and labour economics. The value of this new information will be determined entirely by the extent to which it is applied to the policy functions of government and the research activities of a wide range of Canadian institutions.

Statistics Canada looks forward to participating with the data users in the application of the Labour Force Survey statistics, and welcomes any comments or queries relating to the data.

Appendix I

- (1) Methodology of the Canadian Labour Force Survey, Statistics Canada Cat. No. 71-526, 1976.
- (2) The Labour Force, Statistics Canada Cat. No. 71-001 (monthly), and Labour Force Information, Cat. No. 71-001P (The latter document is published several days in advance of the monthly publication and contains a summary of the data included in the bulletin). See also Historical Labour Force Statistics - Actual Data, Seasonal Factors, Seasonally-Adjusted Data, Cat. No. 71-201 (annual) for historical data from the former survey, and "The Labour Force Historical Series - Unadjusted and Seasonally-Adjusted Data, January 1970-December 1975" (available on request from the Labour Force Survey Division) for revised estimates consistent with data from the revised survey.
- (3) The Revision of Labour Force Survey Population Estimates, Labour Force Survey Division, Statistics Canada.
- (4) Seasonal Factor Forecasts from ARIMA Models, Estella Bee Dagum, Current Economic Analysis Staff, Statistics Canada (unpublished).
- (5) Special note in January, 1976 issue of Labour Force Information, Cat. No. 71-001P.
- (6) Conceptual, Definitional and Methodological Changes in the Labour Force Survey, Labour Force Survey Division, Statistics Canada.
- (7) Comparison of the 1975 Labour Force Survey Estimates Derived from the Former and Revised Surveys, Labour Force Survey Division, Statistics Canada.
- (8) The Revised Labour Force Survey Documents, Labour Force Survey Division, Statistics Canada.

Appendix II

- (1) Form No. 05, LFS Questionnaire: One form completed for each member of the household aged 14 years or over.
 - (2) Code Sheet for Form 05.
 - (3) Form No. 03, Household Record Docket: One form completed for each dwelling in the sample.
 - (4) Code Sheet for Form 03.
-



CODE SHEET 1976

Labour Force Survey Questionnaire (Form 05)

14

- 1 Own illness or disability
- 2 Personal or family responsibilities
- 3 Going to school
- 4 Could only find part-time work
- 5 Did not want full-time work
- 6 Full-time work under 30 hours per week
- 0 Other — Specify in NOTES

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- 1 Own illness or disability
- 2 Personal or family responsibilities
- 3 Going to school
- 4 Quit job for no specific reason
- 5 Lost job or laid off job
- 6 Changed residence
- 7 Dissatisfied with job (poor pay, working conditions, etc.)
- 8 Retired
- 0 Other — Specify in NOTES

17

- 1 Own illness or disability
- 2 Personal or family responsibilities
- 3 Bad weather
- 4 Labour dispute (strike or lockout)
- 5 Layoff (expects to return)
- 6 New job started during week, or job terminated (does not expect to return)
- 7 Vacation
- 8 Holiday (legal or religious)
- 9 Working short-time (because of material shortages, plant maintenance or repair, etc.)
- 0 Other — Specify in NOTES

58

- 1 Working
- 2 Keeping house
- 3 Going to school
- 0 Other — Do not specify in NOTES

20

- 1 Checked with: Public employment agency
- 2 Checked with: Private employment agency
- 3 Checked with: Union
- 4 Checked with: Employers directly
- 5 Checked with: Friends or relatives
- 6 Placed or answered job ads
- 7 Looked at job ads
- 0 Other — Specify in NOTES

63

- 1 Own illness or disability
- 2 Personal or family responsibilities
- 3 Going to school
- 4 No longer interested in finding work
- 5 Waiting for recall (to former job)
- 6 Has found new job
- 7 Waiting for replies from employers
- 8 Believes no work available (in area, or suited to skills)
- 9 No reason given
- 0 Other — Specify in NOTES

33

- 1 Own illness or disability
- 2 Personal or family responsibilities
- 3 Bad weather
- 4 Labour dispute (strike or lockout)
- 5 Layoff (expects to return)
- 6 New job to start in the future
- 7 Vacation
- 0 Other — Specify in NOTES

64

Yes, could not take a job because of:

- 1 Own illness or disability
- 2 Personal or family responsibilities
- 3 Going to school
- 4 Already has a job
- 5 No reason (Available for work last week)
- 0 Other — Specify in NOTES

36

- 1 Own illness or disability
- 2 Personal or family responsibilities
- 3 Going to school
- 4 Could only find part-time work
- 5 Did not want full-time work
- 6 Full-time work under 30 hours per week
- 0 Other — Specify in NOTES

76

Worked for Others

- 1 Paid worker
- 2 Unpaid family worker

Self-Employed

- 3 Incorporated business — With paid help
- 4 Incorporated business — No paid help
- 5 Not incorporated business — With paid help
- 6 Not incorporated business — No paid help (include Self-employed without a business)

41

- 1 Checked with: Public employment agency
- 2 Checked with: Private employment agency
- 3 Checked with: Union
- 4 Checked with: Employers directly
- 5 Checked with: Friends or relatives
- 6 Placed or answered job ads
- 7 Looked at job ads
- 0 Other — Specify in NOTES

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- 1 Primary or secondary school
- 2 University
- 3 Community college, junior college, or CEGEP
- 0 Other — Specify in NOTES



CODE SHEET 1976

Household Record Docket (Form 03)

14

- 1 Single Detached
- 2 Double
- 3 Row or Terrace
- 4 Duplex
- 5 Apartment, Flat
- 6 Institution
- 7 Hotel or Large Lodging House
- 8 Camp - Logging, Construction, etc.
- 9 Mobile Home
- 0 Other - Specify in NOTES

36

A Assign one letter to all members of each family ('A' for each member of the first family, 'B' for each member of the second family, etc.)

to

Z

37

- 1 Head of family
- 2 Spouse
- 3 Son or daughter (natural or adopted)
- 4 Parent or parent-in-law
- 5 Son-in-law or daughter-in-law
- 6 Foster child
- 7 Other relative

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FIRST CODE: Entered by interviewer

(NOTE: for any code other than X, explain situation on appropriate form)

- X LFS questionnaire **completed for all** eligible household members
- E LFS questionnaire **completed for some** (not all) eligible household members
- N **No one at home** (after several calls)
- R Household refusal
- K Interview prevented by **death, sickness, language** problem or other unusual circumstances in the household
- L Interview prevented by **weather** conditions
- T Household **temporarily absent**
- V **Vacant** dwelling (or trailer stall)
- S **Vacant seasonal** dwelling
- C Dwelling **under construction**
- B Dwelling occupied by **persons not to be** interviewed
- D Dwelling **demolished; converted** to business premises; **moved; abandoned** (unfit for habitation); listed in error

- A Interview cancelled for **lack of an interviewer** (Entered by Regional Office only)

SECOND CODE: Entered by Regional Office only.

- Blank Interview or attempt to interview again
- 3 Do not interview unless there is a complete change in household membership
- 4 Attempt to interview again. A letter was sent
- 5 Attempt to interview again. Personal contact made by regional office staff

Column 1: Years of primary and secondary education **completed**.

38

- 0 No schooling
- 1 1 to 8 years of primary and secondary education
- 2 9 or 10 years of primary and secondary education
- 3 11 years of primary and secondary education
- 4 12 years of primary and secondary education
- 5 13 years of primary and secondary education

Column 2: Post secondary education

- 0 No post-secondary education
- 1 Took **some post-secondary** education
- 2 Received a **post-secondary** certificate or diploma
- 3 Received a **university degree**

34

- M Male
- F Female

35

- 1 Now married or living common-law
- 2 Single (never married)
- 3 Widow or widower
- 4 Separated or divorced

40

- 0 Not a household member this month
- 1 Civilian household member this month
- 2 Full-time member of **Canadian Armed Forces** this month

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